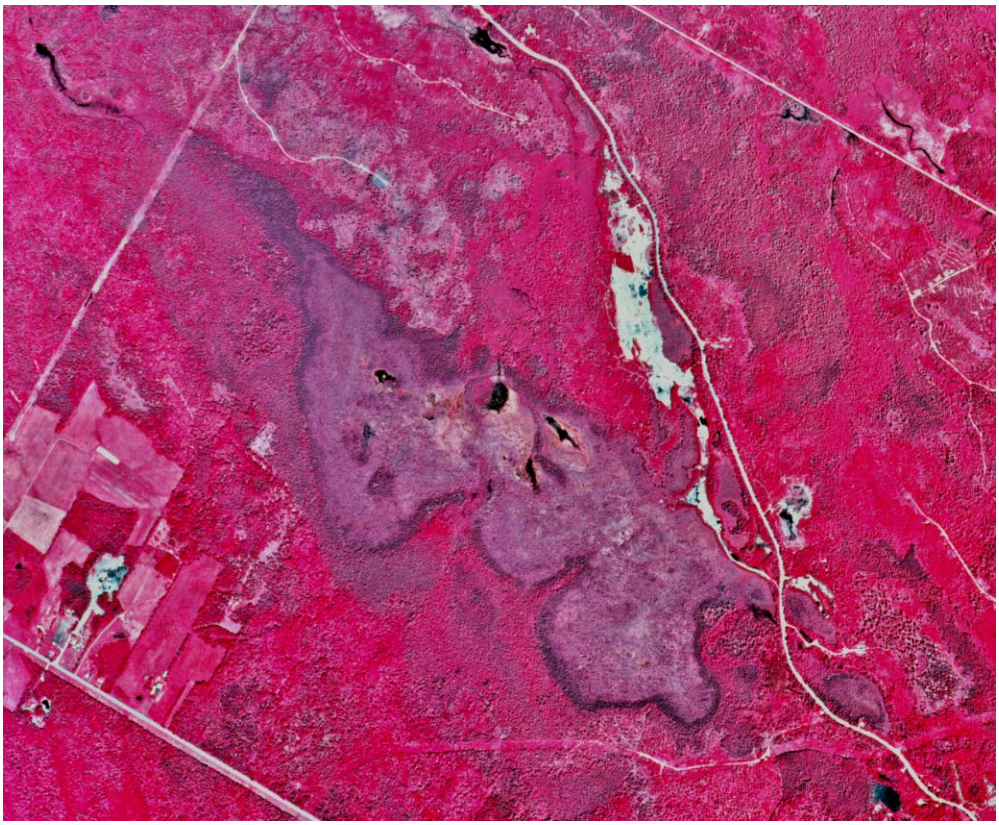
Sawtelle Heath

Baileyville, Princeton

Description:

Sawtelle Heath is a 930-acre level bog ecosystem located between the St. Croix River and Route 1 in Baileyville and Princeton. The west side of the peatland drains northward through Pudding Brook and the east side drains southeastward through Sprague Meadow Brook. Most of the ecological information on Sawtelle Heath was derived from prior studies, most notably Davis and Anderson (1984).



Color infra-red aerial photo of Sawtelle Heath (1991)

Sawtelle Heath is noteworthy for its size, morphology (it has three noticeably raised and concentrically domed areas), diversity of vegetation types, and abundance of rare plants. A vegetation map compiled for the entire peatland by Davis and Anderson (1999) indicates the following vegetation types occur there (in descending order of coverage): 40% mixed cedar woodland fen, 21% dwarf shrub bog, 20% peatland lagg, 9% black spruce bog woodland, 5% acidic fen low sedge lawn, < 1% leatherleaf bog lawn.

Each of the three lobes of the coalesced peatland is predominantly wooded shrub heath or shrub heath. These areas contain a variety of typical dwarf shrubs, such as rhodora (*Rhododendron canadense)*, leatherleaf (*Chamaedaphne calyculata)*, Labrador-tea (*Rhododendron groenlandicum)*, and sheep laurel (*Kalmia angustifolia*) on *Sphagnum* hummocks with varying amounts of spruce and pine. Lichens (primarily *Cladonia* spp.) form hollows. The heath also has three small kettlehole ponds.

Transitional fens are located along drainage channels that link the domed sections, and a large fen lies in the northeast section of the peatland. An "L"-shaped esker in this area separates two fen

areas. The fen northeast of the esker surrounds a pond that drains to the north. This kettlehole pond is surrounded by an expanse of moss bog lawn characterized by slender sedge (*Carex lasiocarpa)* with little *Sphagnum* ground cover and an exposed, muddy surface. Abundant amounts of spatulate-leaved sundew (*Drosera intermedia*), pitcher plant (*Sarracenia purpurea*), and northern bladderwort (*Utricularia intermedia)* occur as well, along with infrequent cattail (*Typha latifolia)*.

Beyond the sedge lawn and pond community, a wooded fen occurs with tamarack (*Larix laricina*) and sedges just north of the esker. Large quantities of bog aster (*Oclemena nemoralis)* occur along with some slender sedge, buckbean (*Menyanthes trifoliata)*, three-way sedge (*Dulichium arundinaceum)*, marsh cinquefoil (*Comarum palustre)* and other fen species characteristic of wet conditions. West of the eskers, the largest moss bog lawn expanse occurs, which also drains to the north. Dominant species are buckbean, white beak-rush (*Rhyncospora alba)*, and several peat mosses including *Sphagnum purpurea, S. papillosum, S. majus*, and mud sedge (*Carex limosa)*. Podgrass (*Scheuchzeria palustris*) and *S. majus* are locally abundant. Throughout this fen are scattered shallow hummocks of sweetgale (*Myrica gale*), buckbean, and bog rosemary (*Andromeda polifolia*). A mixed area of sedge lawns interspersed among ombrotrophic shrub hummocks occurs southeast of a pond at the northwest end of the transitional areas. In contrast to the other two ponds within this complex, the periphery of this pond is wooded to within two meters of the pond edge. Most of the border of this peatland is a forested bog community.

An extensive northern white cedar swamp occurs along the southwestern periphery of the wetland complex. In addition to northern white cedar (*Thuja occidentalis),* balsam fir (*Abies balsamea*), speckled alder (*Alnus incana*), royal fern *(Osmunda regalis),* three-seeded sedge (*Carex trisperma*), bunchberry (*Cornus canadensis*) and winterberry (*Ilex verticillata*) characterize this area.

Many of the rare plants associated with the heath are characteristic of northern Maine and are near the southern end of their range in Washington County. Others, such as sparse-flowered sedge *(Carex tenuiflora*) and showy lady's slipper (*Cypripedium reginae*) are typically associated with cedar swamps and lowlands that are slightly more alkaline.

Rare Species and Exemplary Natural Community Table for the Sawtelle Heath

Common Name	Latin Name	S-RANK	G-RANK	State Status
Exemplary Natural Communities				
Level Bog Ecosystem		S4	N/A	N/A
Low Sedge Acidic Fen		S4	N/A	N/A
Northern White Cedar Swamp		S4	N/A	N/A
Rare Plants				
Swamp birch	*Betula pumila*	S3	G5	SC
Sparse-flowered sedge	*Carex tenuiflora*	S2	G5	SC
Sheathed sedge	*Carex vaginata*	S2	G5	SC
Showy lady's slipper	*Cypripedium reginae*	S1	G3	T
Bog bedstraw	*Galium labradoricum*	S2?	G5	SC
Common mare's-tail	*Hippuris vulgaris*	S2?	G5	SC
Vasey's rush	*Juncus vaseyi*	S1	G5?	E
Swamp fly-honeysuckle	*Lonicera oblongifolia*	S3	G4	SC
Pink wintergreen	*Pyrola asarifolia*	S3	G5	SC

Rare Animals				
Ebony boghaunter	*Williamsonia fletcheri*	S3?	G5	SC
Muskeg darner	*Aeshna subarctica*	S?	G5	SC
Warpaint emerald	*Somatochlora incurvata*	S3?	G4	SC

Other Habitats Mapped by MDIFW:

Waterfowl / Wading Bird Habitat
Deer Wintering Area

Conservation Considerations:

- In general, threats to peatlands include peat mining, cranberry harvesting, timber harvest around the forested perimeters, and development.

- Over half of this peatland is forested or wooded. Consequently, although much of this forested area is low volume and wet, timber harvesting is a possibility. Cedar swamps in particular seem to have a comparatively low threshold for disturbance, and depending on the harvesting regime, recovery of the herbaceous flora may be limited.

- Along the esker ridge just east of the peatland, sand has been mined and road building has filled part of the edge of the bog. Otherwise the peatland is relatively undisturbed, but it is surrounded by industrial forestlands.

Protection Status:

This peatland is all in private ownership, most of it by the forest industry.